

Patent Claims

1. Device for rotary machining of rotors, in particular rotors of gas turbines, on machining surfaces (16) facing radially inward, whereby the respective rotor (10) has at least two rotor disks (12) which are in close proximity axially and have thicker hub areas (21) axially and central hub bores (26) and are connected on the outside radially via projections (13), with a drill rod (23) extending essentially in the axial direction and being held in a rotationally fixed manner and a tool mount (24) holding a lathe tool (27) and extending essentially radially, characterized in that
the drill rod (23) has a projection (25) extending essentially radially, couplable to the tool mount (24) extending essentially radially, whereby the radial dimensions of the projection (25) of the drill rod (23) and of the tool mount (24) are adapted to the dimensions of a hub bore (26) of the rotor (10) to be machined, such that the drill rod (23) and the tool mount (24) can be inserted in an uncoupled state into the hub bore (26), and that, in a coupled state, the lathe tool (27) mounted in the tool mount (24) can be brought into abutment with the machining surface (16) of the rotor (10) facing radially inward, and that the lathe tool (27) is movably mounted in the tool mount (24) via a lathe tool holder (28), whereby the lathe tool (27) can be pivoted primarily axially together with the lathe tool holder (28) with respect to the tool mount (24), and that a drive shaft (32) is guided in the drill rod (23), and that the drive shaft (32) is coupled to the lathe tool holder (28) via a gear (33), whereby the gear (33) converts the driving movement of the drive shaft (32) into a pivoting movement of the lathe tool holder (28).
2. Device according to Claim 1, characterized in that
the gear (33) is formed by at least one gearwheel (34, 35, 37) extending in the projection (25) of the drill rod (23) and by a worm gear (36) extending in the tool mount (24) and having a gearwheel (51) allocated to it.

3. Device according to Claim 2,
characterized in that
several gearwheels (34, 35, 37) are located in the projection (25) of the drill rod (23), a first gearwheel (34) being coupled to the drive shaft (32) and a second gearwheel (35) being coupled to the gearwheel (51) allocated to the worm gear shaft (36).
4. Device according to Claim 2 or 3,
characterized in that
the worm gear shaft (36) acts on the lathe tool holder (28), whereby the lathe tool holder (28) is designed as a segment of a worm gear.
5. Device according to one of the Claims 1 through 4,
characterized in that
lines (46) are integrated into the drill rod (23) and into the tool mount (24), said lines carrying a coolant and/or a lubricant in the direction of the lathe tool (27).
